

REMARKS/ARGUMENTS

This Amendment is being filed in response to the Final Office Action dated December 6, 2010. Reconsideration and allowance of the application in view of the amendments made above and the remarks to follow are respectfully requested.

Claims 1-10 are pending in the Application. Claims 1 and 10 are independent claims.

In the Final Office Action, claims 1-2 and 4-10 are rejected under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2005/0096589 to Sachar ("Sachar") in view of U.S. Patent No. 6,468,265 to Evans et al. ("Evans"). Claim 3 is rejected under 35 U.S.C. §103(a) over Sachar in view of Evans and further in view of U.S. Patent Publication No. 2005/0020911 to Viswanathan et al. ("Viswanathan"). These rejections are respectfully traversed. It is respectfully submitted that claims 1-10 are allowable over Sachar in view of Evans and Viswanathan for at least the following reasons.

Sachar, in paragraph [0021], describes providing a change in a virtual position of a tip along with data from a radar system and a 6-DOF sensor and causing the position of the actual tip within the patient's body to change, and sensing the new position of the actual tip by the radar system and the position of a plurality of fiducial markers by the 6-DOF sensor, to allow synchronization and superimposing of the catheter position on an image produced by fluoroscopy and/or other imaging modality.

As previously argued with regard to Evans, Sachar does not describe (1) "measuring a movement parameter", as for example recited in claim 1. The Final Office Action references 6-DOF sensor as detecting moving body organs, however, it is respectfully

submitted that the Final Office Action lacks any reference to a teaching of a movement parameter in Sachar. It is respectfully submitted that such parameter is not taught, described, or suggested in the referenced paragraphs [0016],[0019], [0020], [0073], [0075], and [0077] or elsewhere in Sachar for that matter. As described in the present application, the movement parameter characterizes, for example, a phase of the heartbeat and may correspond to the electrical coronary activity (ECG) recordable by electrocardiographs.

Similarly, Sachar does not teach (2) "a model that describes a spontaneous movement field or vectorial displacement to which interpolation nodes of the body volume are subject during the at least one reference phase of the heartbeat", as for example recited in claim 1. The model, as illustrated in Figure 1, provides predetermined displacements for every phase of the heartbeat. It is respectfully submitted that such predetermined model is not taught, described, or suggested in the referenced paragraphs [0016], [0019], [0020], or elsewhere in Sachar.

Finally, because there is no discussion of different phases of the heart in Sachar and as such, it does not suggest (3) calculating an estimated movement-compensated location .. during the at least one reference phase, using the (1) movement parameter and the (2) model. It is respectfully submitted that such estimation of a location during the at least one reference phase is not taught, described, or suggested in the referenced paragraphs [0019], [0021], or elsewhere in Sachar.

Evans is cited only for showing interpolation modes and does not remedy the discussed deficiencies of Sachar.

Viswanathan is cited for showing elements of the dependent claim and does not remedy the deficiencies of Sachar and Evans.

It is respectfully submitted that claim 1 is not anticipated or made obvious by the teachings of Sachar and Evans. For example, Sachar and Evans do not teach disclose or suggest, amongst other patentable elements, a (illustrative emphasis added) "a sensor for measuring a movement parameter describing the spontaneous movement of the body volume; a model that describes a spontaneous movement field or vectorial displacement to which interpolation nodes of the body volume are subject during the at least one reference phase of the heartbeat; and a data processing device coupled to the locating device and the sensor for using the movement model, the location and the movement parameter to calculate an estimated movement-compensated location corresponding to the location and the vectorial displacement of the instrument during at least one reference phase" as recited in claim 1 and as similarly recited in claim 10.

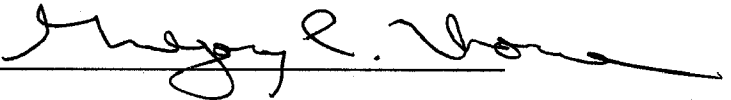
Based on the foregoing, the Applicants respectfully submit that the independent claims are patentable and notice to this effect is earnestly solicited. The dependent claims respectively depend from independent claim 1 and accordingly are allowable for at least this reason as well as for the separately patentable elements contained in each of the claims. Accordingly, separate consideration of each of the dependent claims is respectfully requested.

In addition, Applicants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented

remarks. However, the Applicants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

Applicants have made a diligent and sincere effort to place this application in condition for immediate allowance and notice to this effect is earnestly solicited.

Respectfully submitted,

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January 31, 2011

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